

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (previously presented) In an image rendering environment, a method for dynamically adding one or more document indicia to a document when rendering the document, the method comprising:

providing a rendering job of a document as a single file in a native format that supports at least one of (i) multiple pages, and (ii) multiple images;

storing one or more document indicia as separate sub-images in the single file in the native format;

correlating one or more pages of the document with one or more of the sub-images;

defining an ordered subset of the sub-images to apply to the document; and

using a process to associate the one or more sub-images with one or more of the pages of the document when rendering the document, wherein the process is one of (i) an overlay process, (ii) an underlay process, and (iii) a composite process.

2. (previously presented) A method as recited in claim 1, wherein the native format is one of:

- (i) a tagged image file format; and
- (ii) a portable document format.

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Bezeichnung der Erfindung/Title of the invention/Titre de l'invention:  
(Falls die Bezeichnung der Erfindung nicht angegeben ist, siehe Beschreibung.  
If no title is shown please refer to the description.  
Si aucun titre n'est indiqué se referer à la description.)

Improvements in and relating to switches

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### Improvements in and Relating to Switches

The present invention relates to switches, in particular, although not exclusively, to switches wherein one or more electrical contacts moves relative to other electrical contacts.

5 Existing switches comprising movable electrical contacts suffer from arcing when they are opened and closed with potentials that exceed the arcing voltage of the material from which the electrical contacts of the switch are made. Such arcing causes degradation of the contacts.

10 This problem is even more severe when switching power into highly capacitative loads. In this case, when the contacts are closed a sudden rush of current creates a powerful arc, which erodes the contact and significantly reduces the number 15 of operations of the switch.

As an alternative to electro-mechanical switches, solid state devices have been developed. Solid state switches have the advantage that the resistance of the switch 15 reduces exponentially, therefore no sudden rush of current is exhibited. In addition, the energy is dissipated throughout the material of the switch and therefore no arcing is exhibited.

However, at the present time, these devices cannot achieve the low contact 20 resistance that is usually a feature of electro-mechanical switches. Furthermore, a solid state switch cannot easily dissipate the heat energy produced within the switch. In addition, it is difficult to manufacture high current electrical contacts for solid state 25 devices.

Quantum tunnelling composite materials (QTC), or variably resistive materials, are generally known. Such materials change from being an electrical insulator to 25 being an electrical conductor upon application of force to the material, for example by compression, twisting, or the like, and vice versa. The resistance of a QTC material will gradually reduce upon application of a force, and gradually increase on removal of the force.

International patent application number WO 01/88935 A1 discloses a flexible 30 switching device comprising a QTC material. In this case, the switch comprises a sheet of QTC material sandwiched between two layers of textile material, which textile

storing one or more document indicia as separate sub-images in the single file in the native image format;

correlating one or more pages of the document with one or more of the sub-images;

defining an ordered subset of the sub-images to apply to the document; and

using a process to associate the one or more sub-images with one or more of the pages of the document when rendering the document, wherein the process is one of (i) an overlay process, (ii) an underlay process, and (iii) a composite process.

20. (previously presented) A computer readable medium as recited in claim 19, wherein the native format is one of (i) a tagged image file format and (ii) a portable document format.

21. (previously presented) A computer readable medium as recited in claim 19, wherein correlating one or more pages of the document with one or more of the sub-images comprises at least one of:

linking the one or more pages in a next list;

sub-chaining the one or more sub-images from page images by a sub list; and

sub-chaining the one or more sub-images within sub-images.

22. (previously presented) A computer readable medium as recited in claim 19, wherein defining an ordered subset of the sub-images comprises creating a set of instructions in one of (i) a dynamic manner, and (ii) a static manner.

23. (previously presented) A computer readable medium as recited in claim 19, wherein the overlay process includes applying an overlay on top of a page image, wherein the underlay process includes applying an underlay below the page image, and wherein the composite process includes merging a composite and at least one of:

- (i) the page image; and
- (ii) another sub-image.

24. (previously presented) A computer readable medium as recited in claim 23, wherein the overlay is one of:

- (i) a form;
- (ii) a page numbering;
- (iii) a footer;
- (iv) a header; and
- (v) a caption.

25. (previously presented) A computer readable medium as recited in claim 23, wherein the underlay is a watermark.